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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,146	09/25/2006	David Alan Pears	HGX-012.01	7751
25181 7590 06/14/2010 FOLEY HOAG, LLP PATENT GROUP, WORLD TRADE CENTER WEST 155 SEAPORT BLVD BOSTON, MA 02110				
EXAMINER QIAN, YUN				
ART UNIT 1793		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/568,146

Applicant(s)

PEARS ET AL.

Examiner

YUN QIAN

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,9-12 and 35-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,9-12 and 35-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

Claims 1-37 were pending. Claims 13-34 have been withdrawn. Claims 2, 3, 7 and 8 have been cancelled. The specification, and claims 1, 9, 10, 12-20, 23-25, 28, 31, 33-35, and 37 have been amended.

Previous Grounds of Rejection

In the light of the cancellation, the objection with respect to claim 3 has been withdrawn.

In light of the amendment, the rejection under 35 U.S.C. 102 (e) as being anticipated by Ley et al. (WO 03/006151) with respect to claims 1-12 and 35-37 has been amended, as the permeable polymer shell is further limited and the transition metal catalyst and ligand is limited as being "discrete".

New Grounds Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In this case, the subject matter "the transition metal catalyst and the ligand are discrete" is not properly described in the application as filed. There is no any description for the catalyst and ligands as being discrete entities in the micro-encapsulated system. There is no support in the instant Specification, the catalyst and ligands do not form a conversional complex if it is the meaning of "discrete" by applicants.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-6, 9-12 and 35-37 are rejected under 35 U.S.C. 102 (e) as being anticipated by Ley et. al. (WO 03/006151).

Regarding claim 1, Ley et al. teaches a microencapsulated catalyst-ligand system comprising a catalyst and ligands microencapsulated within a permeable polymer microcapsule shell (claims 1-3).

Such microencapsulated catalyst system taught by Ley et al. comprises a catalyst and ligands (i.e. Wilkinson's catalysts $\text{RhCl}(\text{PPh}_3)_3$, Rh corresponds to applicant's transition metal rhodium and triphenylphosphine corresponds to applicant's

ligand) microencapsulated within a permeable polymer microcapsule shell wherein the microcapsule shell is formed by interfacial polymerization (pages 9-10, claims 1-3).

In addition, the chiral phosphine ligand/transition metal catalyst system is also as evidenced by Burk et al (US 5,008,457) which is entirely incorporated by reference through Ley et al (page 9).

Product-by-process limitation in this claim is noted. It is considered while the product of the reference is made by a different process, the product made and disclosed is the same as being claimed. see "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious different between the claimed product and the prior art product (In re Marosi, 710 F.2d 798, 802,218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113)

Regarding claim 4, the permeable polymer microcapsule shell taught by Ley et al. is the product of self-condensation and/or cross-linking of etherified urea-formaldehyde resins or prepolymers in which from about 50 to about 98% of the methylol groups have been etherified with a C₄-C₁₀ alcohol (claim 3).

Regarding claim 5, the permeable polymer microcapsule shell is a polyurea microcapsule prepared.

Product-by-process limitation in this claim is noted. It is considered while the product of the reference is made by a different process, the product made and disclosed is the same as being claimed. see "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious different between the claimed product and the prior art product (In re Marosi, 710 F.2d 798, 802,218 USPQ 289, 292 (Fed. Cir. 1983), MPEP 2113)

Regarding claim 6, Ley et al. teaches 1-chloro-2,4-phenylene diisocyanate, m-phenylene diisocyanate, and PMPPi as the recited claim (claim 5).

Regarding claims 9 and 36, the catalyst taught by Ley et al. comprises $\text{Pd}(\text{OAc})_2$ as the recited claims (claim 25).

Regarding claims 10-12, as discussed above, the ligand taught by Ley et al. comprises triphenylphosphine (Wilkinson's catalysts $\text{RhCl}(\text{PPh}_3)_3$). It meets the claimed limitations.

Regarding claim 35, Ley et al. teaches to dissolve palladium acetate in a suitable solvent such as a hydrocarbon solvent or a chlorinated hydrocarbon solvent (page 9).

Regarding claim 37, the microencapsulated catalyst system taught by Ley et al. includes the catalyst of $\text{Pd}(\text{OAc})_2$ (claim 25), PPh_3 ligand (Wilkinson's catalyst, page 10), and the shell made from PMPPi and/or tolylene diisocyanate (page 5).

Response to Arguments

With regards to the previous Grounds of Rejection

Applicant's arguments filed on March 25, 2010 with respect to claims 1-12 and 35-37 have been considered but are not persuasive. The examiner would like to take this opportunity to address the Applicant's arguments.

Applicants state the support for the catalyst and the ligands being "discrete", which can be found in page 1, page 9, page 11, page 12, page 14 and Examples 7 to 24. The transition metal and ligands do not form a conventional complex wherein the catalyst is bound to the ligand in the instant application (Remarks, pages 13-15)

The Examiner respectfully submits there is not any description explicitly and/or implicitly to support for the catalyst and ligands as being discrete entities and they are different from the conventional transition metal complexes in the instant Specification.

The arguments of counsel can not take the place of evidence in the record, see MPEP 2145.

In response to applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features, upon which applicant relies (i.e., catalyst's activity) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the reference does not provide sufficient guidance nor direction to one of skill in the art to make and use the claimed subject matter (Remarks, page 16), the Examiner respectfully disagrees.

Ley et al. discloses 30 Examples for method of making and method of using microencapsulated catalyst (title and pages 12-35), and cited references which disclose examples of method of making and method of using transition metal catalyst, and they can be applied to the microencapsulated system (pages 8-9).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUN QIAN whose telephone number is (571)270-5834. The examiner can normally be reached on Monday-Thursday, 10:00am -4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melvin Curtis Mayes can be reached on 571-272-1234. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YUN QIAN/
Examiner, Art Unit 1793

June 8, 2010

/Melvin Curtis Mayes/
Supervisory Patent Examiner, Art Unit 1793